

## Patent claims

1. A master control system for a rolling mill, especially  
a mill train, the rolling mill, especially the mill  
train, having at least one rolling stand driven by  
means of a drive system, and the master control system  
having an automation device for the open-loop and/or  
closed-loop control of the rolling stand and a  
commissioning computer, characterized in that
  - (i) the commissioning computer is designed for the  
commissioning of the drive system and of the  
automation device,
  - (ii) has at least one bus system for the transmission  
of operating parameters and/or program code from  
the commissioning computer to at least one of  
the components comprising the drive system and  
the automation device, and
  - (iii) in that the bus system is designed for the  
transmission of information necessary for the  
operation of the rolling mill, especially the  
mill train, between the drive system and the  
automation device.
2. The master control system as claimed in claim 1, it  
having an operator-control computer for monitoring  
and/or influencing the rolling mill, especially the  
mill train, characterized in that the commissioning  
computer is designed for the commissioning of the  
operator-control computer.
3. The master control system as claimed in claim 2,  
characterized in that the bus system is designed for

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the transmission of operating parameters and/or  
program code from the commissioning computer to the  
operator-control computer.

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4. The master control system as claimed in claim 3, characterized in that the bus system is designed for the transmission of information necessary for the operation of the rolling mill, especially the mill train, between the operator-control computer and at least one of the components comprising the drive system and the automation device.
5. The master control system as claimed in claim 3 or 4, characterized in that it has at least one first bus system for the transmission of operating parameters and/or program code from the commissioning computer to the automation device, connecting the commissioning computer and the automation device by a data link, and has at least one second bus system for the transmission of operating parameters and/or program code to the drive system, connecting the automation device and the drive system by a data link.
6. The master control system as claimed in claim 5, characterized in that the second bus system is designed for the transmission of information necessary for the operation of the rolling mill, especially the mill train, between the automation device and the drive system.
7. The master control system as claimed in claim 5 or 6, it having an operator-control computer for monitoring and/or influencing the rolling mill, especially the mill train, characterized in that the operator-control computer is connected to the first bus system by a data link, and in that the first bus system is designed for

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the transmission of information necessary for the operation of the rolling mill, especially the mill train, between the operator-control computer and the automation device.

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8. The master control system as claimed in one of the preceding claims, characterized

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in that it has at least two automation devices of different types and in that the commissioning computer is designed for the commissioning of both automation devices.

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9. A rolling mill, especially a mill train, the rolling mill, especially the mill train, having at least one rolling stand driven by means of a drive system and a master control system with an automation device for the open-loop and/or closed-loop control of the rolling stand and a commissioning computer, characterized in that

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(i) the commissioning computer is designed for the commissioning of the drive system and of the automation device,

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(ii) has at least one bus system for the transmission of operating parameters and/or program code from the commissioning computer to at least one of the components comprising the drive system and the automation device, and

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(iii) in that the bus system is designed for the transmission of information necessary for the operation of the rolling mill, especially the mill train, between the drive system and the automation device.

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10. A method of operating a rolling mill, especially a mill train, by means of a master control system as claimed in one of the preceding claims, the rolling mill, especially the mill train, having at least one rolling stand driven by means of a drive system, and the master control system having an automation device

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5 for the open-loop and/or closed-loop control of the  
rolling stand and a commissioning computer,  
characterized in that the commissioning of the drive  
system and of the automation device takes place by  
means of one and the same commissioning computer and a  
bus system for the transmission

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- 5 (i) of operating parameters and/or program code from the commissioning computer to at least one of the components comprising the drive system and the automation device and of information necessary for the operation of the rolling mill, especially the mill train, between the drive system and the automation device.